

2929-18912

Period 1 CS 4

ECC1

5 October 1998

Emulsion Status

The candidate track (Emulsion track #3) was lost after 5 plates from the primary vertex. This track has an angle of 70mr. Another track (#8) has a 35mr kink 6mm from the vertex but has a large angle, 370 mr.

Refit

Emulsion tracks 1,2,3,4 are emitted in roughly the same trajectory making the association between all the SFT tracks ambiguous. But tracks 1,2,6,7,8 are cleanly matched. It is not possible to resolve tracks #3 (reported missing) and #4 as the u view has no hits within 10mm of track #4. There is a track at smaller angle that could be used to match all SFT to Em tracks, but the errors are large.

There is a photon cluster in the calorimeter that is clearly associated with a shower that develops in ECC3. There are no reconstructed DC tracks, and there are no muon candidates in the muon ID system.

Also, there is a very good track that can be made from unused lines in u and v and is nicely confirmed by x view hits. It is possible this track is the “lost” track #3. The following track parameters were fit:

$$u' = -0.0370 ; v' = 0.1112 ; u_0 = -167.1\text{mm} ; v_0 = -125.8\text{mm}$$

It may be possible to find this track at the CS.

Conclusions

Although the matching of the lost track #3 to the SFT is not unambiguous, there are sufficient hits/tracks in both views to accommodate the measurement errors of $\pm 5\text{mr}$ from the last plate in which it was measured.

Another possibility is a SFT only track that is very clean and could be checked in the emulsion. However this track is not clearly seen

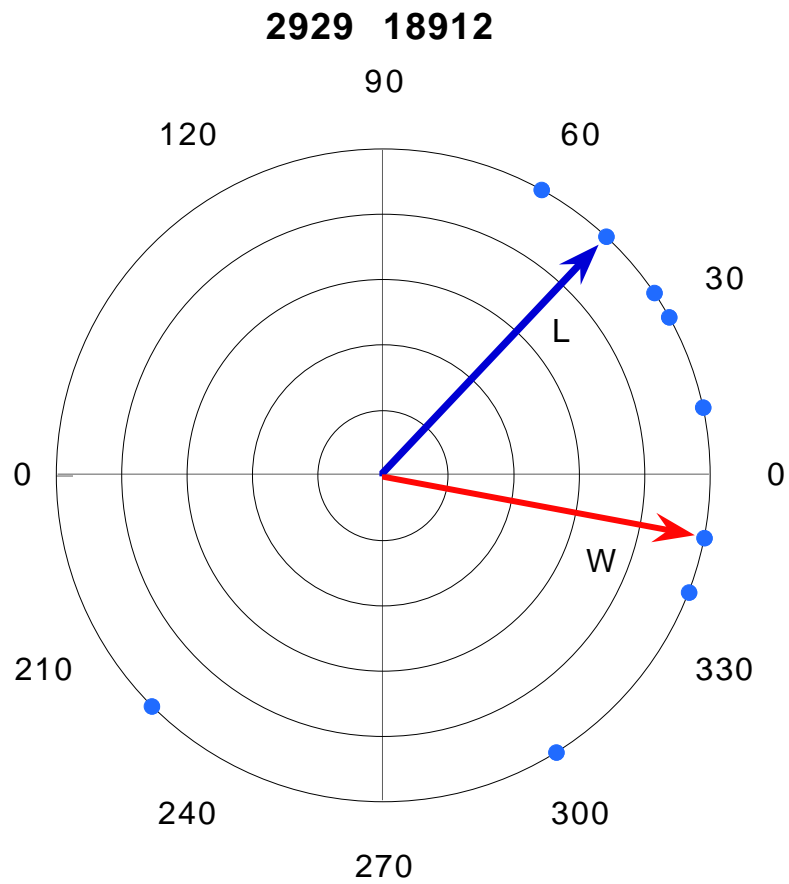
Inconclusive

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Parameter	Symbol	Value	δ (Value)	Comment
1 Polar angle	$\Delta\phi$	1.01		ref track #3
2 Lepton angle	θ_{lep}	0.071		
3 Decay length	L_{dec}	6mm		
4 Daughter momentum	p_d	NA		
5 Daughter angle wrt lepton	θ_d	-		
6 Total Calorimter energy	E_{cal}	19.0		
7 Charged tracks DC3x	N_{79}	-		hits assoc. w/ shower
8 Daughter p_T	p_T	-		
9 Daughter particle	T_d			
10 Emulsion Module	M	1		
11 Visible Energy	E_{vis}	20.0	2	

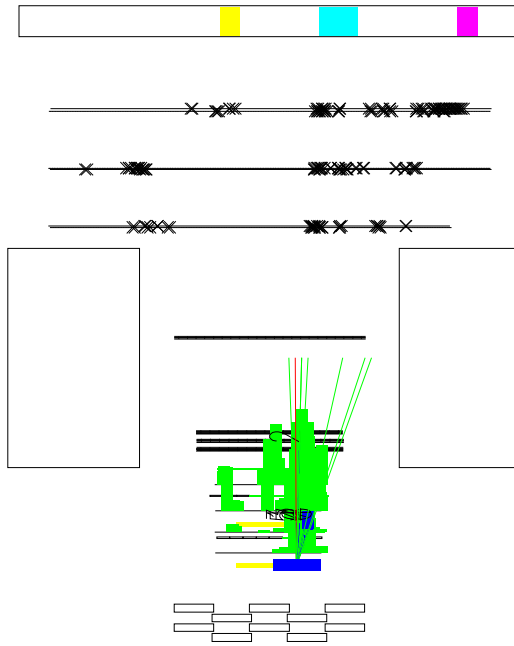
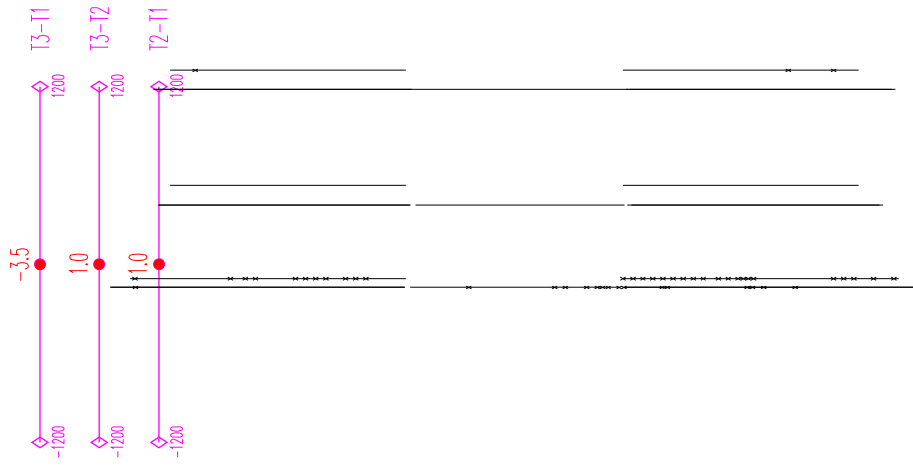
Event Parameters



Polar Angles

E872 Run= 2929 Event= 18912 Wght= 1.0

Triggers set
PHYSICS



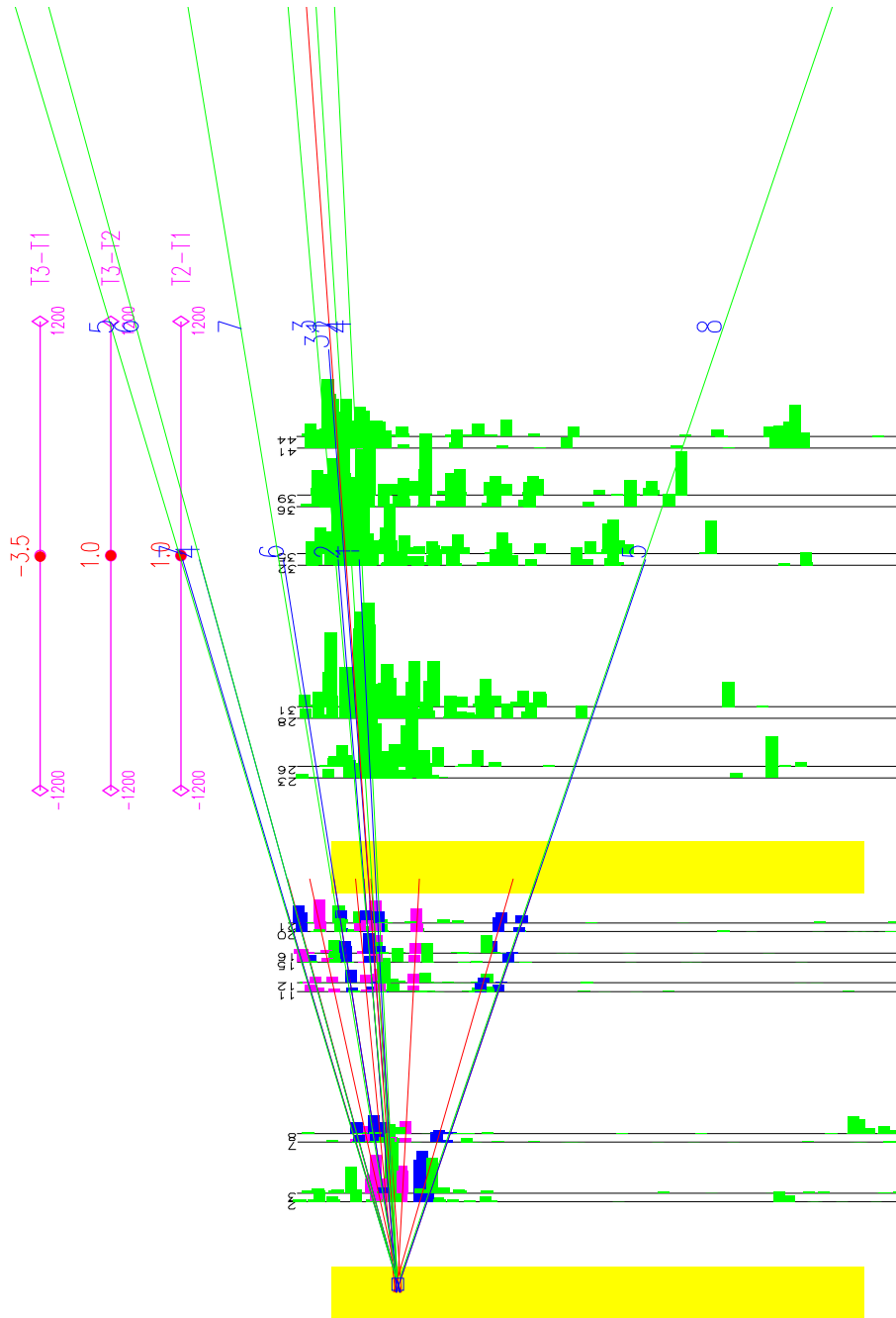
Trk	Mom	χ^2	nhits
1	0.0	5.7	16
2	0.0	9.9	19
3	0.0	0.2	9
4	0.0	0.3	12
5	0.0	5.7	17
6	0.0	2.9	21
7	0.0	1.2	11

Plan view

E872 Run= 2929 Event= 18912 Wght= 1.0

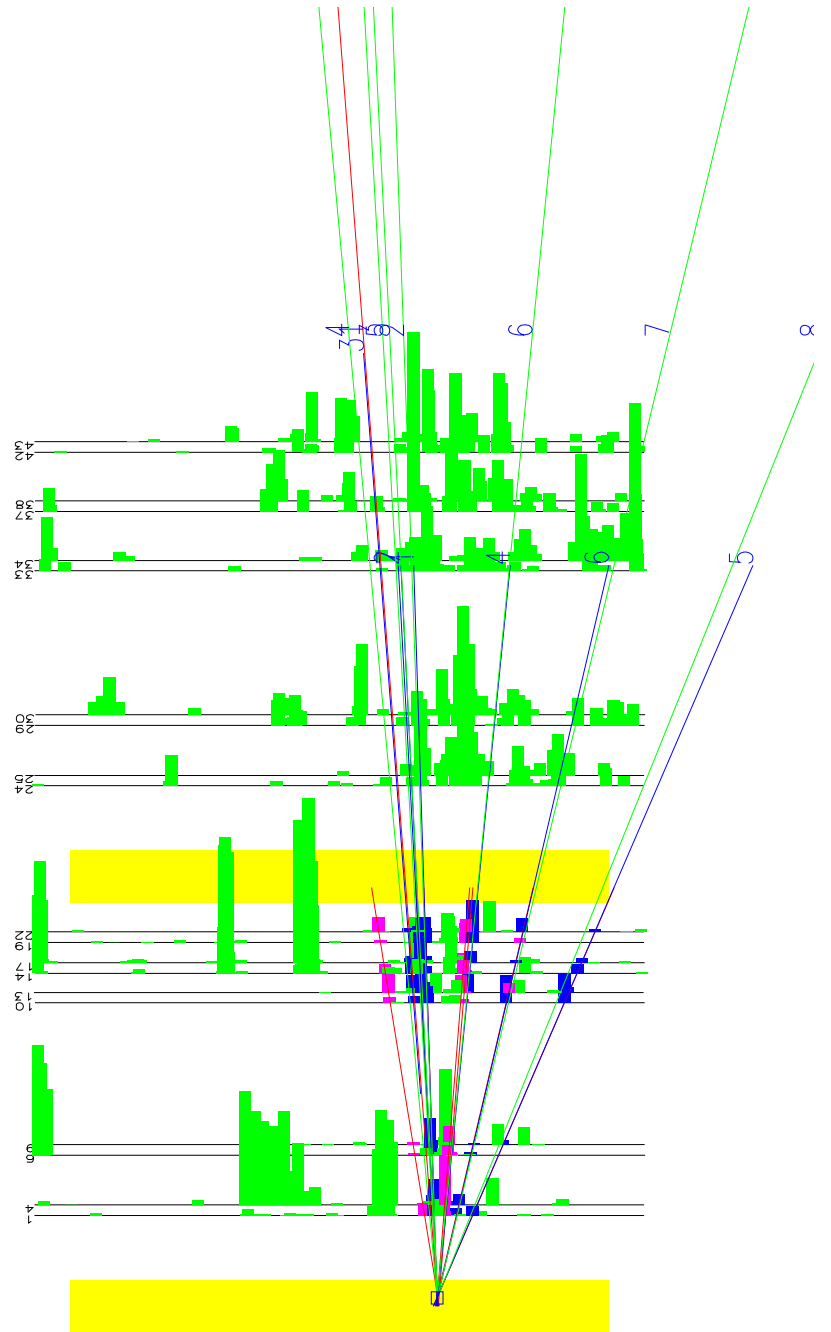
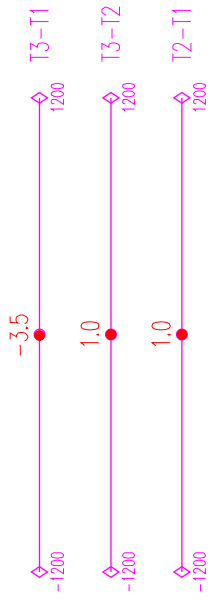
U View

SFT *u*-view

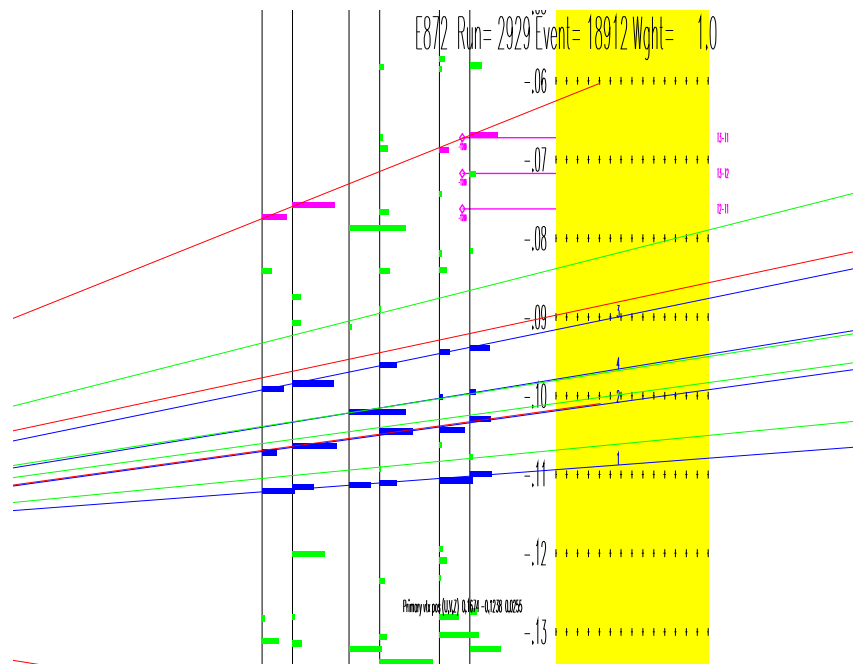
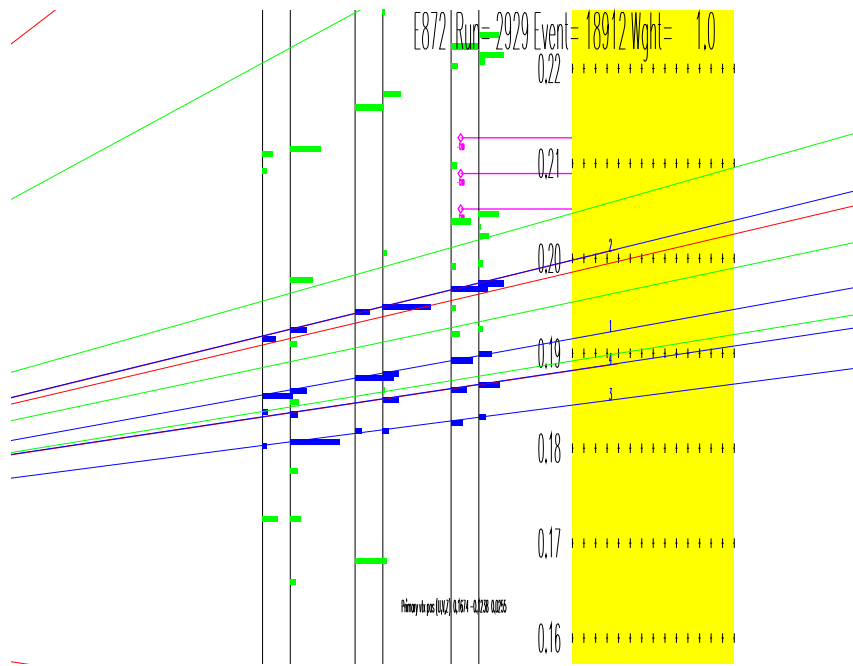


E872 Run= 2929 Event= 18912 Wght= 1.0

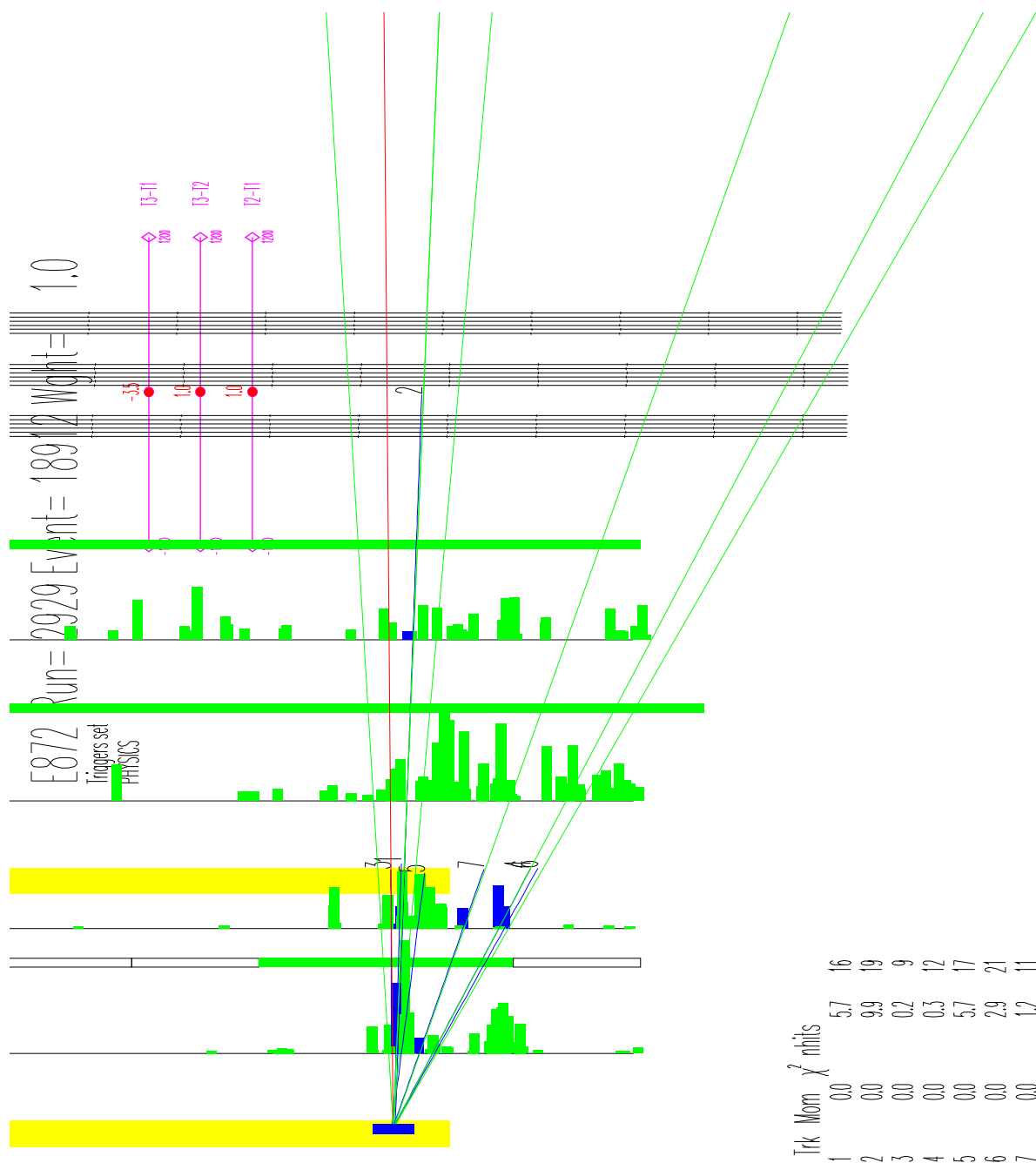
V View



SFT ν -view



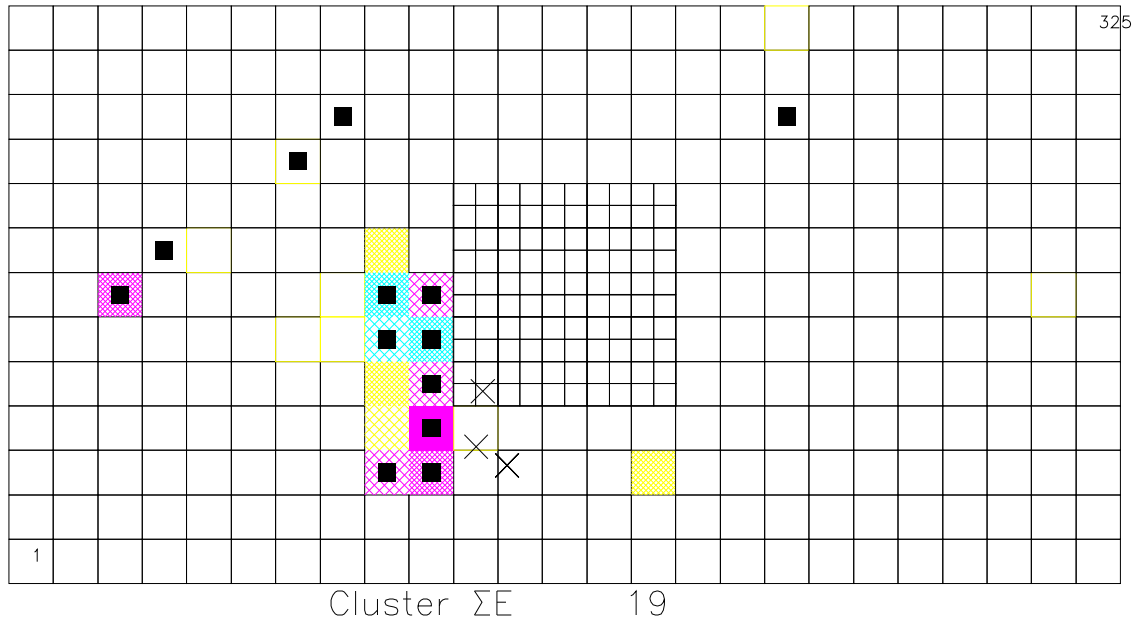
Track #3 possible match
Top: u -view ; Bottom: v -view



SFT *x*-view

E872 Run= 2929 Event= 18912

■ $E > 18 \text{ GeV}$
■ $8.5 < E < 18 \text{ GeV}$
■ $4.0 < E < 8.5 \text{ GeV}$
■ $1.8 < E < 4.0 \text{ GeV}$
■ $0.9 < E < 1.8 \text{ GeV}$
■ $0.4 < E < 0.9 \text{ GeV}$



Calorimeter

The extrapolated tracks are from ustream data only.